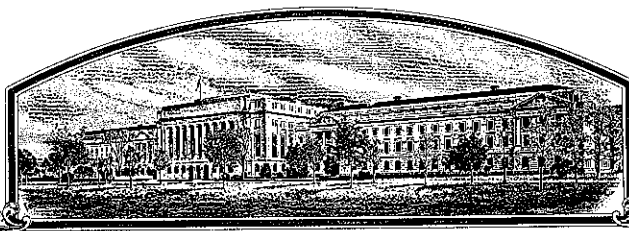


No.

9200174



THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

CJRA - GEJGV Seed Division

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED NOVEL VARIETY OF SEXUALLY REPRODUCED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF *eighteen* YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT (STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

SOYBEAN

'3172'

In Testimony Whereof, I have hereunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington, D.C. this 30th day of November in the year of our Lord one thousand nine hundred and ninety-four.

Attest

Kenneth H. Evers

Commissioner

Plant Variety Protection Office
Agricultural Marketing Service

Mike Egan
Secretary of Agriculture

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

(Instructions on reverse)

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

1. NAME OF APPLICANT(S) (as it is to appear on the Certificate) CIBA-GEIGY Seed Division		2. TEMPORARY DESIGNATION OR EXPERIMENTAL NO. 1701Y	3. VARIETY NAME 3172
4. ADDRESS (street and no. or R.F.D. no., city, state, and ZIP) Post Office Box 18300 Greensboro, NC 27419-8300		5. PHONE (include area code) (919) 547-1000	FOR OFFICIAL USE ONLY PVPO NUMBER 9200174 Filing and Examination Fee: \$ 2,150.00 Date: April 29, 1992 Certificate Fee: \$ 275.00 Date: Oct. 7, 1994
6. GENUS AND SPECIES NAME Glycine Max	7. FAMILY NAME (Botanical) Leguminosae		
8. CROP KIND NAME (Common Name) Soybean		9. DATE OF DETERMINATION 1986 ²² Aug. 1994 September, 1966	
10. IF THE APPLICANT NAMED IS NOT A "PERSON," GIVE FORM OF ORGANIZATION (Corporation, partnership, association, etc.) Corporation			
11. IF INCORPORATED, GIVE STATE OF INCORPORATION New York		12. DATE OF INCORPORATION 1966	
13. NAME AND ADDRESS OF APPLICANT REPRESENTATIVE(S), IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPERS Dr. Robert Bruce Hunter CIBA-GEIGY Seed Division P. O. Box 18300 Greensboro, NC 27419-8300			

PHONE (include area code): (919) 547-1000

CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED (Follow INSTRUCTIONS on reverse)

- a ☒ Exhibit A, Origin and Breeding History of the Variety.
- b ☒ Exhibit B, Novelty Statement.
- c ☒ Exhibit C, Objective Description of Variety.
- d ☐ Exhibit D, Additional Description of Variety.
- e ☒ Exhibit E, Statement of the Basis of Applicant's Ownership.
- f ☒ Seed Sample (2,500 viable untreated seeds). Date Seed Sample mailed to Plant Variety Protection Office _____
- g ☒ Filing and Examination Fee (\$2,150) made payable to "Treasurer of the United States."

15. DOES THE APPLICANT(S) SPECIFY THAT SEED OF THIS VARIETY BE SOLD BY VARIETY NAME ONLY AS A CLASS OF CERTIFIED SEED? (See section 83(a) of the Plant Variety Protection Act)
☐ YES (If "YES," answer items 16 and 17 below) ☒ NO (If "NO," skip to item 18 below)

16. DOES THE APPLICANT(S) SPECIFY THAT THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS?
☐ YES ☒ NO

17. IF "YES" TO ITEM 16, WHICH CLASSES OF PRODUCTION BEYOND BREEDER SEED?
☐ FOUNDATION ☐ REGISTERED ☐ CERTIFIED

18. DID THE APPLICANT(S) PREVIOUSLY FILE FOR PROTECTION OF THE VARIETY IN THE U.S.?

☒ YES (If "YES," through ☐ Plant Variety Protection Act ☐ Patent Act. Give date: _____)
☒ NO

19. HAS THE VARIETY BEEN RELEASED, USED, OFFERED FOR SALE, OR MARKETING IN THE U.S. OR OTHER COUNTRIES?

☒ YES (If "YES," give names of countries and dates)
☐ NO U.S.A. January, 1992

20. The applicant(s) declare(s) that a viable sample of basic seeds of this variety will be furnished with the application and will be replenished upon request in accordance with such regulations as may be applicable.

The undersigned applicant(s) is (are) the owner(s) of this sexually reproduced novel plant variety, and believe(s) that the variety is distinct, uniform, and stable as required in section 41, and is entitled to protection under the provisions of section 42 of the Plant Variety Protection Act.

Applicant(s) is (are) informed that false representation herein can jeopardize protection and result in penalties.

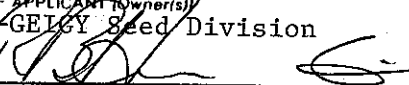
SIGNATURE OF APPLICANT (Owner(s)) CIBA-GEIGY Seed Division BY: 	CAPACITY OR TITLE Vice President of Research	DATE April 28, 1992
SIGNATURE OF APPLICANT (Owner(s))	CAPACITY OR TITLE	DATE

EXHIBIT A**CIBA-GEIGY SEED DIVISION'S APPLICATION FOR 3172****ORIGIN AND BREEDING HISTORY OF THE VARIETY**

Variety 3172 evolved from a cross of HP20-20/HW79149. It is an F_5 derived variety which was advanced to the F_5 generation by modified single-seed descent. The F_6 progeny row of 3172 was grown in Wisconsin during the summer of 1986. Subsequently, 3172 has undergone seven years of extensive testing and purification and has been observed by the breeder to be uniform and stable for all plant traits, from generation to generation, with no evidence of variants.

Approximately 0.06 acres of 3172 (breeders seed) were grown in 1989. One acre of parent seedstock (foundation equivalent) was grown in 1990.

EXHIBIT B**CIBA-GEIGY SEED DIVISION'S APPLICATION FOR 3172****NOVELTY STATEMENT**

Variety 3172 is most similar to the variety A1937. It can be differentiated from A1937 by its pubescence color. 3172 has gray pubescence color and A1937 has tawny pubescence color. It can also be differentiated from A1937 by its susceptibility to phytophthora root rot (caused by *Phytophthora megasperma* Drechs. f. sp. *glycinea* T. Kuan and D. C. Erwin). 3172 is susceptible to races 1, 3, 4 and 7 of phytophthora root rot and is expected to be susceptible to all other races. A1937 carries the Rps₁ gene for resistance. Additionally, 3172 exhibits high seed protein peroxidase activity and A1937 exhibits low seed protein peroxidase activity.

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
LIVESTOCK, MEAT, GRAIN & SEED DIVISION
PLANT VARIETY PROTECTION OFFICE
BELTSVILLE, MARYLAND 20705

EXHIBIT C
(Soybean)

OBJECTIVE DESCRIPTION OF VARIETY
SOYBEAN (*Glycine max* L.)

NAME OF APPLICANT(S) CIBA-GEIGY Seed Division	TEMPORARY DESIGNATION 1701Y	VARIETY NAME 3172
ADDRESS (Street and No., or R.F.D. No., City, State, and Zip Code) P. O. Box 18300 Greensboro, NC 27419-8300		FOR OFFICIAL USE ONLY PVPO NUMBER 9200174

Choose the appropriate response which characterizes the variety in the features described below. When the number of significant digits in your answer is fewer than the number of boxes provided, place a zero in the first box when number is 9 or less (e.g.,). Starred characters ★ are considered fundamental to an adequate soybean variety description. Other characters should be described when information is available.

1. SEED SHAPE:



1 = Spherical (L/W, L/T, and T/W ratios = < 1.2)
3 = Elongate (L/T ratio > 1.2; T/W = < 1.2)

2 = Spherical Flattened (L/W ratio > 1.2; L/T ratio = < 1.2)
4 = Elongate Flattened (L/T ratio > 1.2; T/W > 1.2)

★ 2. SEED COAT COLOR: (Mature Seed)

1 = Yellow 2 = Green 3 = Brown 4 = Black 5 = Other (Specify) _____

3. SEED COAT LUSTER: (Mature Hand Shelled Seed)

1 = Dull ('Corsoy 79'; 'Braxton') 2 = Shiny ('Nebsoy'; 'Gasoy 17')

★ 4. SEED SIZE: (Mature Seed)

Grams per 100 seeds

★ 5. HILUM COLOR: (Mature Seed)

1 = Buff 2 = Yellow 3 = Brown 4 = Gray 5 = Imperfect Black 6 = Black 7 = Other (Specify) _____

★ 6. COTYLEDON COLOR: (Mature Seed)

1 = Yellow 2 = Green

★ 7. SEED PROTEIN PEROXIDASE ACTIVITY:

1 = Low 2 = High

★ 8. SEED PROTEIN ELECTROPHORETIC BAND:

1 = Type A (SP^{1a}) 2 = Type B (SP^{1b})

★ 9. HYPOCOTYL COLOR:

1 = Green only ('Evans'; 'Davis') 2 = Green with bronze band below cotyledons ('Woodworth'; 'Tracy')
3 = Light Purple below cotyledons ('Beeson'; 'Pickett 71')
4 = Dark Purple extending to unifoliate leaves ('Hodgson'; 'Coker Hampton 266A')

★ 10. LEAFLET SHAPE:

1 = Lanceolate 2 = Oval 3 = Ovate 4 = Other (Specify) _____

11. LEAFLET SIZE:

☐ 3

1 = Small ('Amsoy 71'; 'A5312')

3 = Large ('Crawford'; 'Tracy')

2 = Medium ('Corsoy 79'; 'Gasoy 17')

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12. LEAF COLOR:

☐ 3

1 = Light Green ('Weber'; 'York')

3 = Dark Green ('Gnome'; 'Tracy')

2 = Medium Green ('Corsoy 79'; 'Braxton')

★ 13. FLOWER COLOR:

☐ 2

1 = White

2 = Purple

3 = White with purple throat

★ 14. POD COLOR:

☐ 2

1 = Tan

2 = Brown

3 = Black

★ 15. PLANT PUBESCENCE COLOR:

☐ 1

1 = Gray

2 = Brown (Tawny)

16. PLANT TYPES:

☐ 2

1 = Slender ('Essex'; 'Amsoy 71')

3 = Bushy ('Gnome'; 'Govan')

2 = Intermediate ('Amcor'; 'Braxton')

★ 17. PLANT HABIT:

☐ 3

1 = Determinate ('Gnome'; 'Braxton')

2 = Semi-Determinate ('Will')

3 = Indeterminate ('Nebsoy'; 'Improved Pelican')

★ 18. MATURITY GROUP:

☐ 0 ☐ 4

1 = 000

2 = 00

3 = 0

4 = I

5 = II

6 = III

7 = IV

8 = V

9 = VI

10 = VII

11 = VIII

12 = IX

13 = X

★ 19. DISEASE REACTION: (Enter 0 = Not Tested; 1 = Susceptible; 2 = Resistant)

BACTERIAL DISEASES:

★ ☐ 0 Bacterial Pustule (*Xanthomonas phaseoli* var. *sojensis*)★ ☐ 0 Bacterial Blight (*Pseudomonas glycinea*)★ ☐ 0 Wildfire (*Pseudomonas tabaci*)

FUNGAL DISEASES:

★ ☐ 0 Brown Spot (*Septoria glycines*)Frogeye Leaf Spot (*Cercospora sojae*)★ ☐ 0 Race 1 ☐ 0 Race 2 ☐ 0 Race 3 ☐ 0 Race 4 ☐ 0 Race 5 ☐ Other (Specify)☐ 0 Target Spot (*Corynespora cassicola*)☐ 1 Downy Mildew (*Peronospora trifoliorum* var. *manshurica*)☐ 0 Powdery Mildew (*Microsphaera diffusa*)★ ☐ 1 Brown Stem Rot (*Cephalosporium gregatum*)☐ 0 Stem Canker (*Diaporthe phaseolorum* var. *caulivora*)

5

19. DISEASE REACTION: (Enter 0 = Not Tested; 1 = Susceptible; 2 = Resistant) (Continued)

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FUNGAL DISEASES: (Continued)

- ★ ☒ 1 Pod and Stem Blight (*Diaporthe phaseolorum* var; *sojae*)
- ☒ 1 Purple Seed Stain (*Cercospora kikuchii*)
- ☒ 0 Rhizoctonia Root Rot (*Rhizoctonia solani*)
- Phytophthora Rot (*Phytophthora megasperma* var. *sojae*)
- ★ ☒ 1 Race 1 ☒ 0 Race 2 ☒ 1 Race 3 ☒ 1 Race 4 ☒ 0 Race 5 ☒ 0 Race 6 ☒ 1 Race 7
- ☒ 0 Race 8 ☒ 0 Race 9 ☐ Other (Specify) _____

VIRAL DISEASES:

- ☒ 0 Bud Blight (Tobacco Ringspot Virus)
- ☒ 0 Yellow Mosaic (Bean Yellow Mosaic Virus)
- ★ ☒ 0 Cowpea Mosaic (Cowpea Chlorotic Virus)
- ☒ 0 Pod Mottle (Bean Pod Mottle Virus)
- ★ ☒ 1 Seed Mottle (Soybean Mosaic Virus)

NEMATODE DISEASES:

- Soybean Cyst Nematode (*Heterodera glycines*)
- ★ ☒ 0 Race 1 ☒ 0 Race 2 ☒ 1 Race 3 ☒ 1 Race 4 ☐ Other (Specify) _____
- ☒ 0 Lance Nematode (*Hoplolaimus Colombus*)
- ★ ☒ 0 Southern Root Knot Nematode (*Meloidogyne incognita*)
- ★ ☒ 0 Northern Root Knot Nematode (*Meloidogyne Hapla*)
- ☒ 0 Peanut Root Knot Nematode (*Meloidogyne arenaria*)
- ☒ 0 Reniform Nematode (*Rotylenchulus reniformis*)
- ☐ OTHER DISEASE NOT ON FORM (Specify): _____

20. PHYSIOLOGICAL RESPONSES: (Enter 0 = Not Tested; 1 = Susceptible; 2 = Resistant)

- ★ ☒ 0 Iron Chlorosis on Calcareous Soil
- ☐ Other (Specify) _____

21. INSECT REACTION: (Enter 0 = Not Tested; 1 = Susceptible; 2 = Resistant)

- ☒ 0 Mexican Bean Beetle (*Epilachna varivestis*)
- ☒ 0 Potato Leaf Hopper (*Empoasca fabae*)
- ☐ Other (Specify) _____

22. INDICATE WHICH VARIETY MOST CLOSELY RESEMBLES THAT SUBMITTED.

CHARACTER	NAME OF VARIETY	CHARACTER	NAME OF VARIETY
Plant Shape	A1937	Seed Coat Luster	A1937
Leaf Shape	A1937	Seed Size	A1937
Leaf Color	A1937	Seed Shape	A1937
Leaf Size	A1937	Seedling Pigmentation	A1937

23. GIVE DATA FOR SUBMITTED AND SIMILAR STANDARD VARIETY: Paired Comparison Data

VARIETY	NO. OF DAYS MATURITY	PLANT LODGING SCORE	CM PLANT HEIGHT	LEAFLET SIZE		SEED CONTENT		SEED SIZE G/100 SEEDS	NO. SEEDS/POD
				CM Width	CM Length	% Protein	% Oil		
3172 Submitted	130	2.0	78.7			40.0	22.2	19.3	
A1937 Name of Similar Variety	131	3.0	88.9			40.6	21.2	18.9	

PUBLICATIONS USEFUL AS REFERENCE AIDS FOR COMPLETING THIS FORM:

1. Caldwell, B.E., ed. 1973. Soybeans: Improvement, Production, and Uses. Amer. Soc. Agron. Monograph No. 16.
2. Buttery, B.R. and R.I. Buzzell. 1968. Peroxidase activity in seeds of soybean varieties. Crop Sci., 8: 722-725.
3. Hymowitz, T. 1973. Electrophoretic analysis of SBTI-A₂ in the USDA soybean germplasm collection. Crop Sci., 13: 420-421.
4. Payne, R.C. and L.F. Morris. 1976. Differentiation of soybean cultivars by seedling pigmentation patterns. J. Seed Technol. 1: 1-19.

CIBA-GEIGY SEED DIVISION'S APPLICATION FOR 3172
STATEMENT OF THE BASIS OF APPLICANT'S OWNERSHIP

Soybean variety 3172 was developed by the CIBA-GEIGY Seed Division, CIBA-GEIGY Corporation, soybean breeding staff from germplasm sources cited in Exhibit A of this application. CIBA-GEIGY Seed Division believes that the variety is novel as defined in the Plant Variety Protection Act and, therefore, that CIBA-GEIGY Corporation is the sole owner of the variety.